BOOTHBAY HARBOR

MAINE

SURVEY

(REVIEW OF REPORTS)

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
WALTHAM, MASS.

16 January 1962

SURVEY (REVIEW OF REPORTS)

BOOTHBAY HARBOR, MAINE

SYLLABUS

The Division Engineer finds that prospective benefits to recreational boating would be sufficient to justify improvement of the Inner Harbor and Mill Cove in Boothbay Harbor, Maine, at an estimated construction cost of $146,000 (1962); plus preauthorization costs of $7,000, and costs of additional navigation aids of $1,000. He further finds that the benefits to be realized, being recreational, are equally general and local in nature. In view of this aspect of improvement he considers that; local interests, as an item of required local cooperation, should contribute in cash 50 percent of the first cost of construction, or $73,000. Town officials have reported that local interest in harbor improvement is not evident at this time, which would make assurances of local cooperation indefinite and doubtful of fulfillment. Therefore, the Division Enginer recommends no further navigational improvement of Boothbay Harbor, Maine, at this time.

TABLE OF CONTENTS

Paragraph No.		Page No.
1	Authority	1
2	Purpose and Extent of Study	1
3	Description of Navigation Conditions	2
5	Tributary Area	2
8	Bridges Affecting Navigation	3
9	Prior Reports	3
11	Existing Corps of Engineers Project	4
12	Local Cooperation on Existing and Prior Projects	4
13	Other Improvements	4
14	Terminal and Transfer Facilities	4
18	Improvements Desire	5
22	Commerce	6
24	Vessel Trips	6
26	Difficulties Attending Navigation	7
27	Aids to Navigation	7
28	Shore Line Changes	7
29	Water Power and Other Special Subjects	7
30	Plan of Improvement and Project Formulation	7
38	Coordination and Local Cooperation	10
41	Discussion	11
43	Conclusions and Recommendations	12
Appendix A	Estimates of First	A-1
Attachment	Info. Senate Resolution 148	1
Plate 1	Map	

U.S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 Trapelo Road
Waltham 54, Mass.

NEDGW 16 February 1962

SUBJECT: Survey (Revier of Reports) of Boothbay Harbor, Maine

TO: Chief of Engineers, ATTN: ENGCW-P, Department of the Army, Washington, D.C.

AUTHORITY

1. This report of survey of Boothbay Harbor, Maine is submitted in compliance with a resolution adopted February 21, 1956 by the Committee on Public Works of the United States Senate, which reads as follows:

> "RESOLVED BY THE COMMITTEE ON PUBLIC WORKS OF THE UNITED STATES SENATE, that the Board of Engineers for Rivers and Harbors, created under Section 3 of the River and Harbor Act, approved June 13, 1902, be, and is hereby, requested to review the report on Boothbay Harbor, Boothbay Harbor, Maine, published as House Document Numbered 82, Sixty-second Congress, First Session, with a view to determining the advisability of modifying the existing project at this time."

By letter dated 5 March, 1956, the Chief of Engineers assigned the study to the Division Engineer, New England.

PURPOSE AND EXTENT OF STUDY

2. This study was made to consider the desires of local interests, as indicated by their request for additional anchorage, and the economic justification thereof. Detailed hydrographic field surveys were necessary for preparation of this report. The surveys included soundings, probing and topography for all the areas desired for improvement. Available maps, existing and prior records, aerial photographs and commercial statistics were studied. Information obtained from the public hearing was evaluated and incorporated in the study. Subsequent information from local interests, relative to activities in commercial fishing and recreational boating, was also considered.

DESCRIPTION OF NAVIGATION CONDITIONS

3. Boothbay Harbor is situated at the northerly end of Booth Bay on the Maine Coast. It is about 38 miles northeast of Portland, and 10 miles northeast of the Kennebec River mouth. Entrance to the harbor through Booth Bay is obtained by well-marked, wide, and deep channels. The entrance is about 2,000 feet wide with depths ranging to 44 feet. The harbor is somewhat rectangular in shape. It has depths ranging from 20 to 40 feet. Three coves are located on the northerly side of the harbor. The westerly of these, West Boothbay Harbor, is generally deep, but until recently had little waterfront development. The most northerly, Mill Cove, is generally shallow. The easterly cove, known locally as the "Inner Harbor", is the locale of practically all boating activity in the area. Overall area of the inner harbor is about 60 acres. Of this area, about 30 acres have depths ranging from 16 to 27 feet. The remainder has depths ranging from 2 to 15 feet. Immediately south of the west side of the entrance to the inner harbor, there is a small island known as McFarlands Island. This island is separated from the mainland by a narrow shallow channel with a maximum depth of 5 feet.

4. Boothbay Harbor itself is well protected from all winds except those emanating from a southerly direction. The inner harbor is protected from all winds. The mean range of tide is 8.8 feet. The locality is shown on United States Coast and Geodetic Charts No. 230, 314, and 1214, and on the map accompanying this report.

TRIBUTARY AREA

5. The Town of Boothbay Harbor is the immediate tributary area. It is in the heart of a popular summer resort area. In 1950 the permanent population was 2270, increased each summer by an estimated 15,000 to 17,000 vacationists. The assessed real estate valuation in 1956 was $2,333,395.

6. The chief industries of the town are those associated with fishing and fish processing. There is one freezer firm and four distributors, one of which also operates a cannery. Another important industry is boat building. Six firms are engaged in this activity. There are also four boat dealers and 2 firms engaged in the business of the repair and storage of boats. Another important asset to the economy of the town is that type of industry which caters to the needs of the summer residents.

7. There is no railroad serving the town. There is a good system of modern paved highways over which connections to southern and western points can be made.

BRIDGES AFFECTING NAVIGATION

8. One bridge crosses Boothbay Inner Harbor. It is an 850-foot long wooden footbridge, with a swing drawspan. Horizontal clearance in both spans is 32 feet. Vertical clearance is 13.3 feet above mean low water, when closed. The bridge is located about 175 feet north of the existing Federal project. It was completed August 17, 1928, under plans approved by the War Department July 23, 1928.

PRIOR REPORTS

9. Five reports have been made on Boothbay Harbor. Pertinent data concerning these reports are tabulated below.

Published in	Nature and Date of Report	Work Considered and Recommendations of the Chief of Engineers
House Document Number 46, 55th Cong., 1st Sess.	Preliminary Examination 1897	Widening 15-foot area in the upper harbor to bring that depth within reach of the wharves Favorable
House Document Number 277, 56th Cong., 1st Sess.	Survey Report 1900	Widening 15-foot deep area in the upper harbor to bring that depth to the wharves Unfavorable
House Document Number 82, 62nd Cong., 1st Sess.	Preliminary Examination and Survey Report 1911	Dredging along the wharves in the upper end of the harbor on the easterly and westerly sides to 12 feet at mean low water Favorable
Unpublished Report	Preliminary Examination Feb 15, 1946	Dredging in Mill Cove area. Survey recommended.
Unpublished Report	Survey Report Sep 8, 1950	Dredging in Mill Cove area. Unfavorable

10. The survey report contained in House Document No. 82, 62d Congress, 1st Session is the basis for the existing project.

EXISTING CORPS OF ENGINEERS PROJECT

11. The existing project for Boothbay Harbor was authorized by the River and Harbor Act of July 25, 1912. It provides for a depth of 12 feet along the wharves at the upper end of the Inner Harbor. Dredging to that depth was completed in 1913. No maintenance dredging has been accomplished since completion of the project.

LOCAL COOPERATION ON EXISTING AND PRIOR PROJECTS

12. No conditions of local cooperation have been prescribed for harbor improvement at Boothbay Harbor.

OTHER IMPROVEMENTS

13. There have been no known navigational improvements made by either state or local interests since completion of the existing Federal project.

TERMINAL AND TRANSFER FACILITIES

14. There are about 20 active wharves in Boothbay Harbor. Of this total 7 are located on the east side of the harbor, 10 on the west side and one at the entrance to Mill Cove. All are of wood pile and timber construction. Several have floats at the outer end. There are also 3 boatyards, 2 on the east side of the harbor, and one at the entrance to Mill Cove. Seven of the wharves are located on the east side of the harbor. Of these wharves, four are used for the receipt of fish and one for boat servicing, one for a marina and the remaining one used formerly for the receipt of lumber. The latter wharf is now used infrequently. The largest of these wharves used for receipt of fish is 250 by 25 feet, with a depth of 15 feet in the berth. The other wharves have shallow berths ranging from 0 to 6 feet.

15. Ten wharves are located on the west side of the harbor. Of these wharves, one is owned by Gulf Oil Corporation and is used for barge receipts of petroleum products. The remaining nine wharves are used chiefly by recreational craft.

16. Two of the three boatyards are located on the east shore. These yards have a total of 5 marine railways and open storage areas. The maximum capability of the railways is restricted to boats no greater than 70 feet in length. The third boatyard is engaged chiefly in construction of new boats. It has two railways capable of handling boats of 500 tons weight.

17. In addition to the above described wharves, a marina has been recently installed on the west side of the inner harbor. A yacht club

with attendant mooring facilities has also been located in West Boothbay Harbor. These installations have served to alleviate the crowded anchorage conditions formerly prevalent in the inner harbor.

IMPROVEMENT DESIRED

18. In order to determine the nature and extent of navigational improvement desired by local interests, a public hearing was held at Boothbay Harbor on September 5, 1956. The hearing was well attended. Included in the attendance were officials of the State of Maine and of Boothbay Harbor, representatives of the fishing industry, local yachting interests, and town residents.

19. As the harbor is one of the more important recreational harbors along the Maine coast, its use in this respect has been steadily increasing in recent years. This increase has resulted in over-crowded anchorage conditions. To alleviate such conditions additional protected anchorage was requested by local interests. Such anchorage, it was stated, could be provided in the area between the north limit of the existing project and the wooden footbridge crossing the harbor. Additional improvements requested consisted of; dredging a channel between the mainland and McFarlands Island, dredging the area abutting the wharves along the east side of the harbor, providing a 15-foot channel in the Inner Harbor, and dredging a channel 15 feet deep and 100 feet wide into Mill Cove. Subsequent to the hearing, local interests requested additional anchorage in Mill Cove.

20. As justification for improvement the composition of the various fleets was cited. The home recreational fleet contains about 337 boats ranging from small sail boats to large cruisers, 60 feet in length. There are also 15 excursion boats ranging from 40 to 85 feet in length. The transient recreational fleet was given as about 75 boats per day. This fleet was stated to be, in the main, of the larger type boat suitable for offshore cruising. In addition to the recreational fleets, there is a sizeable fishing fleet, numbering 15 offshore type fishing boats and 115 lobster fishing boats. During the summer recreational season these boats crowd the present anchorage to such an extent that the possibility of increasing either the home or transient fleets was stated to be impossible at this time. Further, the crowded anchorages, so hamper navigation that in proceeding to the wharves boats often collide, with resultant damage to the boats involved.

21. The Department of Sea and Shore Fisheries of the State of Maine submitted a brief advocating navigational improvement of Boothbay Harbor as a means of restoring it to its former importance as a fishing port. The brief cited the silting of the bottom which makes

access to the wharves impossible for the larger fishermen. Should improvement be effected, it was predicted that at least 5 new draggers would base in Boothbay Harbor with a resultant increase of about 2,400,000 pounds of fish landed annually. No substantiating evidence of this claim was produced.

COMMERCE

22. Commerce in Boothbay Harbor consists of fish and fish products. Tabulated below is a comparative statement of commerce for the most recent 10-year period.

Year	Tons
1951	5,208
1952	4,371
1953	3,518
1954	1,737
1955	553
1956	593
1957	1,207
1958	1,856
1959	1,770

23. The commerce shown above indicates a sharp drop in commerce for the year 1954, 1955 and 1956 and gains in the following years. The drop is not believed to be a true indication of the commerce, as many of the fish cargoes landed locally are unreported. It is not considered that fish landings will increase materially as a result of improvement. The present facilities are ample to absorb any reasonably expected increase in fish landings.

VESSEL TRIPS

24. There are no available data on size and drafts of vessel trips in Boothbay Harbor. Reported vessel trips aggregated 793 in 1959. It is considered that a large part of these trips constitute the excursion boat traffic and the fishing fleet, which trips are largely unreported. There are 15 excursion boats making at least two trips daily during the summer for a total of about 5400 trips. Fishing craft are estimated to total about 10,000 trips annually.

25. There are no records of vessel trips of pleasure craft. The yachting season lasts about 120 days and it is reasonable to assume that the boats are used at least one half the days available. This would aggregate 337 x 60 or 9,920 trips for pleasure craft. In addition, transient craft would account for about 2,500 vessel trips.

DIFFICULTIES ATTENDING NAVIGATION

26. The inner harbor is spacious with depths generally sufficient for the boats using it. The principal difficulty attending navigation results from crowded anchorage conditions. In the summer recreational season, Boothbay Harbor is a favorite port of call for the numerous recreational craft that cruise along the Maine coast. Boothbay Harbor also has a substantial home recreational fleet. At the height of the season the combination of the local and transient fleets fills the harbor to capacity. As no fairway is left available for boats entering or leaving the harbor, navigation becomes very difficult, requiring that boats thread their way through the anchored boats. This type of navigation is particularly difficult for the larger excursion boats. Local interests claim that additional anchorage would make sufficient space available to provide for a fairway at all times.

AIDS TO NAVIGATION

27. The United States Coast Guard has been consulted relative to the need for additional aids to navigation in the event of improvement. It has stated that one third class nun buoy would be required. Initial installation cost would be $1000 with an annual maintenance charge of $70.

SHORE LINE CHANGES

28. The shore of Boothbay is the typical crenulated shore line of northern Maine. It consists of numerous ledge outcroppings interspersed with relatively short beach areas. In developed areas the shore is lined with piers and bulkheads. It is not considered that dredging the harbor would affect this type of shore line.

WATER POWER AND OTHER SPECIAL SUBJECTS

29. The waterway is tidal. Flood control or matters of water power are not pertinent to this report. The improvements considered would have no adverse effect on shellfish or wildlife.

PLAN OF IMPROVEMENT AND PROJECT FORMULATION

30. In the selection of an overall plan of improvement it was necessary to consider the specific desires of local interests together with evaluating the most economical plan that would provide for the general needs of existing and future navigation of the waterway. Prior to selection all phases of improvement were studied. The studies included consideration of various depths, locations of anchorages, feasibility of specific items of improvement, and economic justification of the plan. The plan found most suitable in fulfillment of

these requisites consists of:

a. A 5.2 acre mooring basin, 6 feet deep, in Mill Cove together with an entrance channel of the same depth and 100 feet wide.

b. A 1.2 acre mooring basin, 6 feet deep in the inner harbor, immediately north of the existing project, and

c. A connecting channel, 75 feet wide and 6 feet deep, between McFarlands Island and the mainland.

31. The improved basins, with specialized fore and aft moorings, would provide mooring area for 110 to 120 of the shallower draft boats thus allowing more space for the deeper draft boats in the existing anchorage. The channel between McFarlands Island and the mainland would provide for protected access to the two areas.

32. Investigation of the request for deepening the areas along the east shore of the Inner Harbor revealed that a considerable amount of ledge was present. It was also found that the area to be deepened was not extensive enough to provide any substantial addition to the overall anchorage in the harbor. In view of these two factors it was considered that this phase of improvement would not be economically justified. Also, it was found from hydrographic surveys that sufficient depths are present for a channel and anchorage in the harbor at the present time. Therefore it was considered that this phase of improvement could best be accomplished by local regulation.

33. Estimates of first cost of the selected plan were prepared. Ledge rock was encountered in the anchorage extension in the inner harbor. The remaining areas contained ordinary materials such as mud, sand, and gravel. Dredging quantities are in terms of in-place material and provide for a 1-foot allowance for overdepth. Side slopes of 1 vertical on 3 horizontal were used. Unit prices are based on an "Average Job Curve", revised to reflect prices prevailing in 1962.

PROJECT CONSTRUCTION COSTS

Corps of Engineers

Dredging, Channels and Anchorages	$76,500
Rock removal	38,000

Removal of Old Wreck (Mill Cove)	$10,000
Engineering and Design	5,000
Supervision and Administration	16,500
	$ 146,000
Pre-Authorization Studies	7,000
	$ 153,000
U.S. Coast Guard	
Aids to Navigation	1,000
	$154,000

34. Estimated annual charges are based on an anticipated 100-year project life, and at interest rates of 2.625 percent for Federal funds and 3.5 percent for non-Federal. The annual charges have been computed on the basis that local interests will contribute in cash 50 percent of the first cost of improvement and provide spoil disposal areas as required.

Federal Annual Charges

Corps of Engineers

Interest ($80,000 x .02625)	$2,100
Amortization (80,000 x.00213)	170
Additional Annual Maintenance	2,230
	$4,500

U.S. Coast Guard

Interest and Amortization (1,000 x .02838)	28
Additional Annual Maintenance	72
	$ 100
Total Federal Charges	4,600

Non-Federal Annual Charges

Interest and Amortization (73,000 x .03616)	2,600
Total Annual Charges	$ 7,200

35. As it was found that the existing and prospective fishing fleets have ample navigational facilities for current and prospective needs, no benefits were evaluated from this source. It was found, however that recreational boating would benefit from improvement. The benefits would result from provision of additional mooring areas in the harbor.

36. Benefits were evaluated for the current and prospective recreational fleets. The benefits would accrue from increased use of the harbor and additions to the home fleet with further benefits to be derived from the ability to accomodate more transient boats. Benefits totaled $13,494 for the home fleets and $2066 for the transient craft, amounting to $15,560 to be derived from improvement. This total compared with estimated, annual charges of $7200 resulted in a benefit-cost ratio of 2.2.

37. Inasmuch as the benefits to be derived from improvement were recreational, and as such, equally general and local in nature, first costs of construction were apportioned on the basis that local interests should bear 50 percent of the first cost of construction. Such costs are estimated at $146,000 (1962) making the local share $73,000.

COORDINATION AND LOCAL COOPERATION

38. All Federal, State, and local agencies, having an interest in the improvement, were consulted in regard to any effects which the proposed improvement may have on their activities. The U.S. Fish and Wildlife Service reported on the project. The Service expects no increase in seafood landings to result from improvement and foresees no significant adverse effect on fish and wildlife resources in the event of project construction.

39. Should improvement be recommended local interests should, as a measure of local cooperation, provide reasonable assurances that the following requirements be fulfilled:

a. Hold and save the United States free from damages that may result from construction and maintenance of the project.

b. Provide, without cost to the United States, all lands, easements, rights-of-way, and suitable disposal areas, if it is determined after detailed studies that such areas are necessary. The spoil areas are to be furnished without cost to the United States and shall include such dikes, bulkheads and embankments as may be necessary for construction and maintenance of the project.

c. Provide a suitable public landing in Mill Cove, open to

all on equal terms. The estimated cost of the Public Landing is $15,000.

d. Contribute in cash 50 percent of the first cost of project construction, said contribution presently estimated at $73,000 (1962)

40. In 1959 local interests were advised of the above requirements of local cooperation, and requested to comment on the probability of fulfillment of such requirements, should improvement be authorized. The Town Planning Board requested time to study the matter. Later, in February of 1961, it was found that local development of recreational boating facilities was underway in West Boothbay Harbor. As any such development would have an effect on Boothbay Harbor, local government officials were again contacted. A meeting with these officials was held in Boothbay Harbor in November 1961. At this meeting the Town officials indicated that local desire for improvement had waned to the point where no local cash contribution could be expected. By letter, dated 5 December 1961 the Town Manager confirmed the Town's position on improvement.

DISCUSSION

41. Boothbay Harbor is one of the more important recreational harbors along the southerly Maine coast. Situated as it is, about 38 miles northeast of Portland, in a popular summer vacation area, it is a natural locus for recreational boating, by both locally based and transient fleets. These combined fleets numbered about 400 boats in 1959. In addition, a permanently-based fleet of about 130 fishing boats utilized the harbor facilities. With a total of 530 boats, plus constantly expanding fleets, conditions became so crowded that local interests were desirous of obtaining more mooring area. Investigation and study of the harbor revealed that expansion of harbor facilities could be made and would be economically justifiable. It was found that the benefits to be realized would be recreational, which would require a local cash contribution toward the first cost of construction, an amount estimated at $73,000. In 1959 local interests were advised of this requirement but were reluctant to give assurances of such cooperation until they had given the matter further consideration.

42. Prior to the study, practically all of the boating activity had been concentrated in the Inner Harbor. This was a natural development as the settled portion of the Town was located there, plus the fact that services and supplies could be procured more easily in that area. For these reasons local interests desired improvement of the Inner Harbor or Mill Cove, immediately adjacent. However, local interest is now, to some degree, beginning to be attracted to West Boothbay Harbor. A yacht club has been established there and mooring

areas established. Development of this area would tend to ease crowded anchorage conditions in the Inner Harbor and retard the urgency of improvement in that area. For this reason it is believed that the Town would prefer to observe developments in the area, rather than make the capital outlay necessary for improvement of the Inner Harbor. By letter of 5 December 1961, the Town informed the Division Engineer that there was little local interest in Federal improvement at this time.

CONCLUSIONS AND RECOMMENDATIONS

43. Although sufficient benefits to recreation boating are available for improvement of Boothbay Harbor, local interest in improvement has dwindled to the point where the requirement of a local cash contribution toward the first cost of construction, could not be assured of fulfillment. Therefore, the Division Engineer recommends no further navigational improvement of Boothbay Harbor at this time.

SEYMOUR A. POTTER, JR.
Brigadier General, USA
Division Engineer

SURVEY OF BOOTHBAY HARBOR, MAINE

APPENDIX A

ESTIMATES OF FIRST COST

1. Estimates of first cost have been prepared for the considered plan of improvement. The plan consists of dredging a basin in Mill Cove, approximately 5.2 acres in area and 6 feet deep, a mooring basin at the head of the inner harbor, approximately 1.2 acres in area and 6 feet deep, and a connecting channel between McFarlands Island and the mainland 6 feet deep. Federal construction consists of dredging the two basins and channel. Non-Federal construction consists of providing a public landing in Mill Cove.

2. Probings taken in the inner harbor indicate that a considerable amount of ledge rock will be encountered within the limits of the desired improvement. In addition, soundings were taken over the entire areas desired for improvement. Except for ledge rock removal, all dredging would consist of removal of mud, sand, and gravel. Dredging quantities have been estimated in terms of in-place measurement and provide for dredging to project depth in ordinary material and 1 foot below project depth in rock, plus an overdepth allowance of 1 foot in each case. Unit prices are based on prices prevailing in January 1962. Prices are also based on removal of material by bucket dredge and disposal at sea. The necessity of blasting and removal of broken rock in the inner harbor is considered to preclude the possibility of using hydraulic equipment in the inner harbor. It is also considered that the type of material to be removed in Mill Cove will necessitate the use of a bucket dredge. The estimate of costs for the plan selected as most feasible is as follows:

PROJECT COST ESTIMATE

Cost Account Number		Cost Estimate
09	Channels - Dredging two 6' anchorages and connecting channel (30,250 cu. yds. of ordinary material @ $2.20)	$ 66,500
	Contingencies @ 15%	10,000
	Sub-total	$ 76,500

Cost Account Number	Item	Cost Estimate
09	Rock Removal (660 yds of ledge rock @ $50.00)	33,000
	Contingencies @ 15%	5,000
	Sub-total for rock removal	38,000
	Total dredging and rock removal	$114,500
	Removal of hulk	10,000
	Total construction	$124,500
29	Pre-authorization studies	7,000
30	Engineering and Design	5,000
31	Supervision and Administration	16,500
	Total Cost (Corps of Engineers and Non-Federal contributions	153,000
	Non-Federal Contributions	73,000
	Non-Federal Costs	
	Lands and damages	0
	Relocations	0
	Other	
	Cash Contribution (50% of 146,000)	73,000
	Public Landing (self-liquidating)	15,000

Summary of Estimated Costs

Federal Costs	
Corps of Engineers	80,000
Coast Guard	1,000
Required Non-Federal Costs	88,000
	$169,000

BOOTHBAY HARBOR, MAINE

Information Called for by Senate
Resolution 148, 85th Congress.
Adopted 28 January 1958

1. Navigation Problem. Boothbay Harbor is situated at the northerly end of Booth Bay on the Maine Coast. It is about 38 miles northeast of Portland, Maine. There are 3 small coves at the northerly end of the Harbor, West Boothbay Harbor, Mill Cove, and the Inner Harbor. West Boothbay Harbor and the Inner Harbor are comparatively deep. Conversely, Mill Cove is very shallow. The inner harbor is the scene of the greater portion of boating activity.

2. In the inner harbor the sizes of the recreational fleets, both home and transient, create crowded anchorage conditions and cause considerable navigational difficulties during the summer recreational season. These difficulties arise from the fact that space is limited, boats completely fill the area, navigation to the wharves is difficult and at times impossible. To alleviate these difficult navigational conditions local interests requested improvement by provision of additional anchorage areas.

3. Improvements Considered, Costs and Local Cooperation. The improvements considered would provide for additional anchorages in the Inner Harbor and Mill Cove together with a connecting channel between the two sections of the harbor. Various depths, dimensions, and areas were studied. Consideration of the draft of boats was made. The selected plan of improvement would provide for additional anchorage areas totalling about 6.2 acres and a connecting channel. A depth of 6 feet for all areas was selected. The estimated cost of improvement is $146,000 plus additional costs of $7,000 for preauthorization studies and $1,000 for aids to navigation. As the improvement would benefit recreational boating exclusively, local interests as part of local cooperation would be required to contribute in cash 50 percent of the first cost of construction, said contribution estimated at $73,000 (1962). In addition, local interests would be required to; hold and save the United States free from damages resulting from improvement, provide without cost to the United States all lands, easements, and rights-of-way necessary for construction and maintenance of the project, when and as required, and provide a suitable public landing in Mill Cove. Local interests were advised of these requirements in 1959. The Town of Boothbay referred the matter to its Planning Board, which requested time to study the matter. After several consultations with this agency, the Town Manager, by letter of

5 December 1962, advised the Division Engineer that local interest in improvement was no longer evident.

4. Discussion. Local interests had requested improvement of the Inner Harbor as the most desirable location to handle the expanding recreational boating activities. The shopping center of the Town bordered this area. All of the wharves and boatyards were also located there, and supplies, fuels and repairs could be procured more readily. West Boothbay Harbor had no such facilities and it was felt that recreational boating would not be attracted to it. However, in recent years, one yacht club has been established in the area. It has provided wharfage and mooring facilities for recreational boating, which tended to ease the critical navigational conditions in the Inner Harbor. The Town would prefer to wait and observe conditions in this newly-developed area before committing itself to improvement of the Inner Harbor. Therefore, the Division Engineer recommends no improvement for navigation in Boothbay Harbor at this time.

CORPS OF ENGINEERS

U. S. ARMY

BOOTHBAY HARBOR

WEST HARBOR POND

MILL COVE

RAILWAY PT.

MILL PT.

McFARLAND I.

WEST BOOTHBAY HARBOR

BOOTHBAY HARBOR

McKOWN PT.

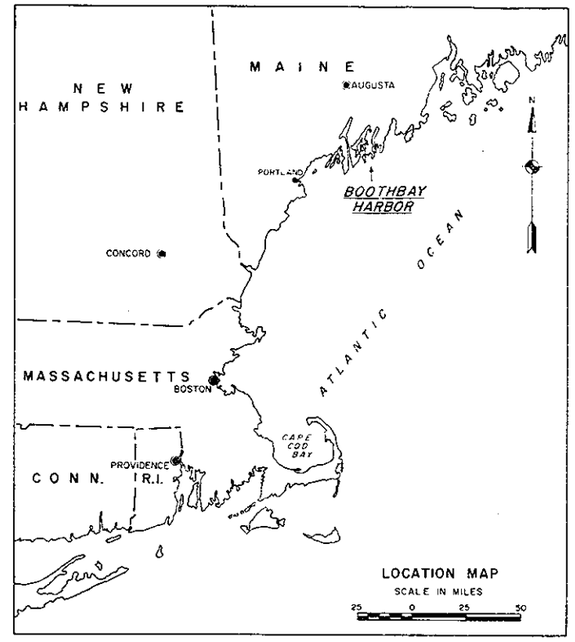
JUNIPER PT.

TUMBLER I.

BOOTH BAY

EXISTING PROJECT

IMPROVEMENT CONSIDERED
NOT RECOMMENDED
ANCHORAGES 6 FEET DEEP
CHANNELS 6 FEET DEEP



U.S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS, WALTHAM, MASS.

BOOTHBAY HARBOR
MAINE

SHEET 1 OF 1 — SCALE IN FEET 300 0 300 600 900 — FEB. 1962

APPROVED
CHIEF, ENGINEERING DIVISION

SURVEYED
CHIEF, CIVIL PROJECTS BRANCH

DR BY R.P.L.

CHIEF, RIVER AND HARBOR SECT.

TR BY R.P.L.

PROJECT ENGINEER

CH BY

TO ACCOMPANY SURVEY REPORT DATED FEB. 16, 1962

FILE NO. 1507 D-6-2